



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/764,913      | 01/26/2004  | Bor-Wen Chan         | TS03-305            | 2955             |

42717 7590 01/24/2007  
HAYNES AND BOONE, LLP  
901 MAIN STREET, SUITE 3100  
DALLAS, TX 75202

|          |
|----------|
| EXAMINER |
|----------|

MITCHELL, JAMES M

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2813

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 01/24/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/764,913

Applicant(s)

CHAN ET AL.

Examiner

James M. Mitchell

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 23-35 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-22 is/are allowed.
- 6) ☒ Claim(s) 1-10, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to the applicant's remarks filed November 7, 2006.

#### ***Election***

Claims 23-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 7, 2006.

Applicant's election with traverse of Species I in the reply filed on November 7, 2006 is acknowledged. The traversal is on the ground(s) that since applicant can be his own lexicographers that to distinguish between embodiments based on the use of the second etch is improper, because the word is "merely for convenience," and that the difference is only semantics. Also, traversal is on the grounds that the restriction was incomplete, because allegedly there were other embodiments in the specification and that "examiner does not have the right to structure an election" where it is impossible for applicant to elect certain embodiments. This is not found persuasive.

While it is true applicant can be his own lexicographer and even create a special meanings if he clearly redefines the term in the specification<sup>1</sup>; the claim must apprise those of looking at the patent the scope of the claimed invention. In this instance, applicant has chosen to use the word second, which has general accepted meaning that denotes a particular order in a method claim. Because the word second has not

---

<sup>1</sup> See. M.P.E.P §217305(a).

Art Unit: 2813

been redefined, the claim is interpreted based on its plain and ordinary meaning. As such, when contrasting two claims that use a second etch step for different purposes, the word is no longer merely for convenience, but its use creates two distinct methods.

As for applicant's allegation that the restriction was incomplete based on an embodiment of Fig. 9, applicant's specification on page 16 explicitly states that Figures 7-12, are part of the second embodiment. Moreover, even if the drawing in the figure appears different it still falls within the second species of the second etch used to transfer a pattern. As such, even assuming that Figure 9 was a different embodiment applicant has not been prevented from electing to prosecute the claims drawn to Figure 9, because they necessarily fall within Species II.

For the reasons stated above and since the restriction meets the requirement M.P.E.P §800, the restriction requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-10, 36 and 37 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure that is not enabling. The bilayer stack formed on a gate layer is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The bilayer and gate layer is considered essential, because applicant

specification at page 7 explicitly states that his objectives/invention of forming a gate is achieved by coating/ forming of the bilayer on the gate layer.

Claims 1-10, 36 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-10, 36 and 37 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the narrow disclosure of making of a gate for a semiconductor, it does not reasonably provide enablement for the wide breadth of claim 1, which could be applicable for any purpose and any type of substrate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims without undue experimentation. See e.g., M.P.E.P 2164.06(b).

#### ***Allowable Subject Matter***

Claims 11-22 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or make obvious trimming a pattern in a photoresist and organic underlayer with a second etch to produce a bilayer stack of a

Art Unit: 2813

second width and then transferring the trimmed pattern to the gate with a third etch including all the limitations of the independent claim.

### **Conclusion**

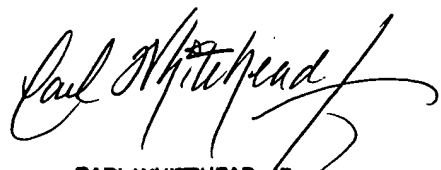
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ex. Mitchell, J.D.  
January 21, 2007



CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800